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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,669	07/17/2003	Jean-Claude Dispensa	FR920020044US1	2080

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IBM Corporation
Intellectual Property Law
Dept. 1Q0A/Bldg. 040-3
1701 North Street
Endicott, NY 13760

EXAMINER

KEEHN, RICHARD G

ART UNIT	PAPER NUMBER
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2152

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/621,669	Applicant(s) DISPENSA ET AL.	
	Examiner Richard G. Keehn	Art Unit 2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/24/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-11 have been examined and are pending.
2. Claims 10 and 11, presented as dependent claims, are independent claims and have been examined as independent claims.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claim 11 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.
5. Claim 11 fails to fall within a statutory category on invention. It is directed toward a computer program itself, not a process occurring as a result of executing the program, a machine programmed to operate in accordance with the program, nor a manufacture structurally and functionally interconnected with the program in a manner which enables the program to act as a computer component and realize its functionality. It's also clearly not directed to a composition of matter. Therefore it is non-statutory under 35 U.S.C. 101.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-4, 6-7 and 9-11 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,915,457 B1 (Miller).

As to Claim 1, Miller anticipates a method for splitting and sharing routing information among several routers within a group of routers acting as a single border router in an Internet protocol (IP) network, each router comprising a routing table, said method, for use in a router of the group, comprising the steps of:

selecting routes in the routing table of the router (Miller, Column 7, lines 22-23 recite the updating of a route in a routing table);

requesting other routers of the group to replace, in their routing tables, each selected route with the router as next hop (Miller – Column 8, lines 5-20 recite the example of the B router interface failure, wherein B notifies A to update its router table);

associating at least part of non-selected routes, each one with another of the group (Miller – Column 8, lines 5-20 recite the example of the B router interface failure, wherein B notifies A to update its router table. A notifies C of B's selected interface alternate route and requests C to update its router table); and

removing and replacing in the routing table, each non-selected route associated with a router of the group by the associated router as next hop (Miller – Column 8, lines 5-20 recite the example of the B router interface failure, wherein B notifies A to update

its router table. A, who did not select B's interface alternate route, notifies C of B's selected interface alternate route and requests C to update its router table).

As to Claim 2, Miller anticipates the method according to the claim 1, comprising the further step of forwarding IP traffic corresponding to a non-selected route, to the router associated with said route within the routing table (Miller – Column 6, line 56 to Column 7, line 5 recites the forwarding of IP traffic by specifying the best route for said traffic to travel. The API uses that information to route the traffic).

As to Claim 3, Miller anticipates the method according to claim 1, wherein the step of requesting comprises the further steps of receiving from other routers the IP traffic corresponding to the selected routes (Miller – Column 6, lines 45-47 recite the receipt from outside routers the IP traffic); and

routing said IP traffic (Miller – Column 6, line 56 to Column 7, line 5 recites the forwarding of IP traffic by specifying the best route for said traffic to travel. The API uses that information to route the traffic).

As to Claim 4, Miller anticipates the method according to claim 1, wherein the step of associating comprises the step of receiving from each other router of the group means for associating at least part of non selected routes, each one with another router of the group (Miller – Column 3, lines 61-63 recite the cooperation of routers as a

group).

As to Claim 6, Miller anticipates the method according claim 1, comprising the preliminary steps of establishing sessions with other routers of the group (Miller – Column 6, lines 56-58 recite the acceptance of routing information from outside routers, which means that the communication session had commenced); and

creating a list of routers of the group (Miller – Column 6, lines 56-58 recite the acceptance of routing information from outside routers and populating the final control plane routing table).

As to Claim 7, Miller anticipates the method according to claim 1, comprising the preliminary step of establishing sessions with other border routers (Miller – Column 6, lines 56-58 recite the acceptance of routing information from outside routers, which means that the communication session had commenced; Column 3, lines 59-66 recite the communication with other networks).

As to Claim 9, Miller anticipates the method according to claim 1, wherein routers within the group exchange routing information using Border Gateway Protocol (Miller – Column 7, lines 45-47 recite BGP).

As to Claim 10, Miller anticipates a router comprising means adapted for carrying out the steps of the method according to claim 1 (Miller – Column 3, lines 61-63 recite the routing hardware).

As to Claim 11, Miller anticipates a computer program product comprising instructions for carrying out the method according to claim 1 when said computer program product is executed on a router (Miller – Column 4, lines 24-25 recite routing software).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miller as applied to claim 1 above, and further in view of US 2002/0118682 A1 (Choe).

As to Claim 5, Miller anticipates the method according to claim 1.

Miller does not disclose, but Choe discloses an invention substantially as claimed, including wherein the step of selecting routes in the routing table comprises the further step of selecting contiguous IP addresses within a given address range (Choe – Page 3, ¶ [0023] recites the selection of adjacent IP addresses within a prefix range).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine selecting contiguous IP addresses within a given address range taught by Choe, with the step of selecting routes in the routing table taught by Miller.

One of ordinary skill in the art at the time the invention was made would have been motivated to integrate routing table address selection with hash tables to facilitate high speed lookup (Choe – Page 3, ¶ [0019]).

12. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miller as applied to claim 1 above, and further in view of US 7,065,587 B2 (Huitema et al.).

As to Claim 8, Miller anticipates the method according to claim 1.

Miller does not disclose, but Huitema et al. disclose an invention substantially as claimed, including wherein the step of selecting routes comprises the preliminary step of comparing the size of the routing table with a predefined threshold (Huitema et al. – Column 3, lines 10-13 recite determining whether a routing table has reached its limit).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine comparing the size of the routing table with a predefined threshold taught by Huitema et al., with the step of selecting routes taught by Miller.

One of ordinary skill in the art at the time the invention was made would have been motivated to adhere to the real life practical limit of the routing table (Huitema et al. – Column 3, lines 10-12).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. These include:

- US 6,915,457 B1 - System, method and apparatus for network service load and reliability management.
- US 5,926,463 A - Method and apparatus for viewing and managing a configuration of a computer network.
- US 2003/0126233 A1 - Content service aggregation system.
- US 2002/0051449 A1 - Interdomain routing system.
- US 6,895,461 B1 - Method and apparatus for accessing remote storage using SCSI and an IP network.
- US 6,611,872 B1 - Performing multicast communication in computer networks by using overlay routing.
- US 7,111,073 B1 - Apparatus for estimating delay and jitter between network routers.
- US 6,266,335 B1 - Cross-platform server clustering using a network flow switch.
- US 6,148,410 A - Fault tolerant recoverable TCP/IP connection router.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard G. Keehn whose telephone number is 571-270-

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5007. The examiner can normally be reached on Monday through Thursday, 8:30am - 7:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571-272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RGK

/Bunjob Jaroenchonwanit/
Supervisory Patent Examiner, Art Unit 2152